

5 WE CLAIM:

1. A method of increasing host plant transformation frequencies, said method comprising:
 - a. adding at least one copy of a gene involved in T-DNA integration, to the host plant and
 - b. expressing the additional copies of the gene.
2. The method of claim 1, wherein the gene is a histone gene.
- 15 3. The method of claim 2, wherein the histone gene is an H2A gene.
4. A transgenic plant comprising at least one additional copy of the *RAT5* gene of *Arabidopsis*.
- 20 5. A mutant of the *RAT5* gene that interferes with T-DNA integration into a foreign plant genome.
6. The mutant of claim 5, designated *rat5*.
- 25 7. A genetic construct comprising at least one copy of a histone gene.
8. The genetic construct of claim 7, wherein the histone gene is H2A.
9. The genetic construct of claim 8, wherein the histone gene is a *RAT5* gene.
- 30 10. A host cell transformed by at least one copy of a gene involved in T-cell integration.
- 35 11. The host cell of claim 10, wherein the gene is capable of overexpressing histone to enhance plant transformation.

-21-

5 12. The host cell of claim 11, wherein the gene is the *RAT5* gene of
Arabidopsis.